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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/555,117	05/25/2000	MAKOTO YAMAMOTO	05905.0109	4314

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EXAMINER

KUMAR, SRILAKSHMI K

ART UNIT	PAPER NUMBER
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2675

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DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/555,117

Applicant(s)

YAMAMOTO, MAKOTO

Examiner

Srilakshmi K. Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13,14,25 and 36-44 is/are allowed.
- 6) ☒ Claim(s) 1-11,15,18,21-24,26-35,45,50 and 55 is/are rejected.
- 7) ☒ Claim(s) 16,17,19,20,46-49,51-54,56-59 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The following office action is in response to the Amendment B filed December 29, 2003.

Claims 1-11, 13-59 are pending. Claims 1, 15, 45-59 are amended.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 15, 18, 45, 50 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al (US 6,139,433) in view of Best (US 5,358,259).

As to independent claims 1 and 15, Miyamoto et al disclose an image generating device for generating images capturing a moveable body moving within a virtual three dimensional space from a viewpoint of a camera (Fig. 11b) in said virtual three dimensional space (col. 1, lines 53-65, col. 2, lines 30-65) comprising: movement means for controlling the movement of said camera viewpoint based on a position relationship between an observable point set in relation to said movable body and a line of sight of the current camera viewpoint (col. 12 line 50-67, col. 25, lines 10-46). Miyamoto et al disclose in Fig. 32 and col. 44, line 57-col. 45, line 31, where the movable body is influenced by circumstances. Miyamoto et al do not disclose artificial intelligence processing means for executing AI processing incorporating emotions of the movable body influenced by circumstances, evaluation/determination, and factors of behaviors in said virtual three dimensional space, wherein the AI processing determines an action which is independently associated with the movable body. Best discloses a videogame system for

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enhanced processing and display of graphical character elements. In col. 3, lines 62-col. 5, lines 34, Best discloses different types of dialog for a video game where the character of the game convey emotion. Best discloses in col. 8, lines 20-55 where the player has conversations with the video game character in which you select your response and in turn the game character responds with an answer. For example, in col. 8, lines 20-55, the character states "Please help me! My mother's trapped in the car!" to which the player responds to "Pry the door open", in turn the character then response "I tried to, but I can't get it to open", thus Best discloses where the AI process determines an action. It would have been obvious to one of ordinary skill in the art to combine the systems of Miyamoto et al with that of Best as they both disclose video game systems with a branching story. The Best system is advantageous as it enables the storage, processing, and display of graphical elements and takes the form of a branching story that simulates dialog between two or more animated characters showing emotion on a TV screen and two or more human game players, thus simulating a three way or four way dialog. Each character can be an animated cartoon, digitized live action, analog live action, a sprite and be player controlled or not (col. 3, lines 15-21).

As to independent claim 18, limitations of claim 1, and further comprising, Miyamoto et al disclose in Figs. 27A & 27B and in col. 39, line 58-col. 40, line 65, an image generating device for generating images by representing a moveable object simulating a person (shown by Miyamoto in the form of "Mario"), and moving inside a virtual three dimensional space as a plurality of parts connected via connection points (Fig. 27A), said image generating device comprising, first specifying means for specifying a subpart on a terminal side and a main part on a central side with respect to two adjacent parts among a plurality of parts, shown by Miyamoto

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in Fig. 27A, items 1608 and 1610; first operating means for operating an impulse of the subpart motion communicated to the main part under a presumption that the connection point of said subpart to said main part is a fixed point, first repeating means for repeating, in a recurring manner the movements of said first specifying means and said first operating means from the terminal side of said movable object to the central side thereof as shown by Miyamoto in Fig. 27B and col. 40, the different movements capable of the movable object; second specifying means for specifying a main part on the central side and a subpart on the terminal side with respect to two adjacent parts among said plurality of parts, second operating means for operating an impulse of the main part motion communicated to the subpart; and second repeating means for repeating, in a recurring manner, the movements of said second operating means from the central side of said movable object to the terminal side thereof (Figs 27a & b, cols. 39 and 40).

As to claims 45, 50 and 55, see limitations of claim 1, above.

3. Claims 2-11, 21-24, 26-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al (US 6,139,433) in view of Best (US 5,358,259) as applied to claims 1, 15 and 18, and further in view of Kami et al. (US 5,853,324).

As to dependent claim 2, limitations of claim 1, and further comprising wherein said virtual three dimensional space is a game space (col. 1, line 53-col. 2, line 10), and said movable body is an enemy in a gun shooting game within in said game space.

Miyamoto et al do not disclose where the moveable body is an enemy in a gun shooting game. Kami et al disclose in Figs. 7A-C and col. 7, line 61-col. 8, line 64, a gun shooting game with an enemy. Miyamoto et al also disclose where the virtual game space includes different courses in col. 2, lines 19-40. It would have been obvious to one of ordinary skill in the art to

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incorporate the gun shooting game of Kami et al into the system of Miyamoto et al as they both are gaming systems with three dimensional virtual space and further Miyamoto et al is able to change the courses.

As to dependent claim 3, limitations of claim 2, and further comprising, display means for displaying said game space on a screen (Fig. 1, item 58);

Kami et al disclose a gun unit (Fig. 1, item 20) capable of producing signals on said screen when the player manipulates the trigger (Figs.1 and 2); a sensor for detecting an arrival position of said signals on the screen of said display means (Fig. 2, items 12 and 200, and col. 6, lines 14-53); and game implementing means for implementing a gun shooting game between said enemy and said player based said arrival position (Figs. 7A-C, col. 7, line 61-col. 8, line 64).

Though Miyamoto et al do not disclose a gun shooting game, Miyamoto et al also disclose where the virtual game space includes different courses in col. 2, lines 19-40, and disclose input type devices in Fig. 1, items 56a and 56b. It would have been obvious to one of ordinary skill in the art to incorporate the gun shooting game with the gun input device as shown by Kami et al into the system of Miyamoto et al as they both are gaming systems with three dimensional virtual space and Miyamoto is capable of including different types of courses.

As to dependent claim 4, limitations of claim 3, and further comprising, observable point moving means for moving said observable point toward said movable body for each display of one frame of said image, wherein a position of said observable point is at a different position than that of said movable body (Fig. 11B and col. 25, lines 9-46).

As to dependent claim 5, limitations of claim 4, and further comprising wherein said observable point moving means comprises, means for moving said observable point toward said

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movable body in prescribed distances, for each display of one frame of said image, along a straight line connecting said observable point and said movable object as shown in col. 37, line 8-col. 38, line 13.

As to dependent claim 6, limitations of claim 4, and further comprising wherein said observable point moving means comprises, means for operating an open angle between a current line of sight of said camera and a line extending from the camera position through said observable point, means for operating a rotational angle based on the open angle and means for rotating, for each display of one frame of said image, the current line of sight of said camera viewpoint toward said observable point by said rotational angle as shown in col. 37, line 8-col. 38, line 13.

As to dependent claim 7, limitations of claim 3, and further comprising wherein said movement means comprises, judging means for judging the occurrence of specific circumstances of the relative position relationship between said camera viewpoint and said observable point; and viewpoint movement control means for controlling the position of said camera viewpoint to continuously capture the position of said observable point as shown in col. 37, line 8-col. 38, line 13.

As to claims 8-10, 21-23, see claims 4-7, above.

As to dependent claim 11, limitations of claim 9, and further comprising avoidance manipulation means for said player to manipulate a character to avoid the bullet fired from said enemy. Miyamoto et al do not disclose avoidance of a bullet fired from said enemy. Kami et al disclose a defense state as shown in Fig. 7A, and col. 7, line 61-col. 8, line 64. Though Miyamoto et al do not disclose a gun shooting game, Miyamoto et al also disclose where the

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virtual game space includes different courses in col. 2, lines 19-40, and disclose input type devices in Fig. 1, items 56a and 56b. It would have been obvious to one of ordinary skill in the art to incorporate the gun shooting game with the manipulation means to be in a defense state as shown by Kami et al into the system of Miyamoto et al as they both are gaming systems with three dimensional virtual space and Miyamoto is capable of including different types of courses.

As to dependent claims 24, 26-29, limitations of claims 1-11, 13-23, a storage medium storing a program for executing functions of at least one of the movement means, display means, game implementing means, observable point moving means and avoidance manipulation means of the image generating device (Fig. 1, item 68).

As to claims 30-35, see limitations of claims 1-11, above.

Allowable Subject Matter

4. Claims 13, 14, 25, 36-44 are allowed.

The prior art of record do not disclose wherein the path of the at least one bullet deviates from the position of the player until a predetermined condition is met.

5. Claims 16, 17, 19, 20, 46-49, 51-54, and 56-59 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments filed December 29, 2003 have been fully considered but they are not persuasive.

With respect to applicant's arguments in regards to claims 1, 15 and 45, Applicant discloses where the combination of Miyamoto and Best do not disclose the limitation of wherein

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the AI processing determines an action which is independently associated with the movable body, and wherein the emotion factors and behavior factors are determined independently. Best discloses in col. 8, lines 20-55 where the player has conversations with the video game character in which you select your response and in turn the game character responds with an answer. For example, in col. 8, lines 20-55, the character states "Please help me! My mother's trapped in the car!" to which the player responds to "Pry the door open", in turn the character then response "I tried to, but I can't get it to open", thus Best discloses where the AI process determines an action and where the emotion and behavior is determined independently.

Further, applicant suggests no reason to combine Miyamoto and Best. Examiner disagrees. Applicants, themselves, disclose in arguments where Miyamoto and Best disclose video games with a branching story. The motivation to combine Miyamoto and Best is to disclose where the branching story characters are able to display emotions.

It would have been obvious to one of ordinary skill in the art to combine the systems of Miyamoto et al with that of Best as they both disclose video game systems with a branching story. The Best system is advantageous as it enables the storage, processing, and display of graphical elements and takes the form of a branching story that simulates dialog between two or more animated characters showing emotion on a TV screen and two or more human game players, thus simulating a three way or four way dialog. Each character can be an animated cartoon, digitized live action, analog live action, a sprite and be player controlled or not (col. 3, lines 15-21). The combination of Miyamoto and Best is proper and disclose the above limitations, thus the rejection is maintained.

With respect to claim 18, Applicant suggests Miyamoto does not disclose the limitation of “first operating means for operating an impulse of the subpart motion communicated to the main part under a presumption that the connection point of said subpart to said main part is a fixed point”. Miyamoto clearly suggests this feature in col. 40, lines 4-8, where based on the detected state and position of Mario in the 3D world, a decision is made as to Mario’s desired next display position and state. Thus the rejection of Claim 18 is maintained.

With respect to claim 21, Applicant suggests Miyamoto does not disclose interpolation means for performing motion interpolation based on operational results. Miyamoto clearly discloses in cols 37 and 38, where depending upon different operations of the game character, the video game itself will change with the operations. Thus, the rejection of Claim 21 is maintained.

With respect to claim 22, Applicant suggest Miyamoto does not disclose collision judgment means. Miyamoto discloses in cols. 37 and 38 different operations including collisions of the game character. Rejection of claim 22 is maintained.

In regards to claims 2-11, 23, 24, 26-35, 50 and 55, see rejections and arguments above.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Srilakshmi K. Kumar** whose telephone number is **(703) 306 5575**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras, can be reached at (703) 305-9720.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231


or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Srilakshmi K. Kumar
Examiner
Art Unit 2675

SKK
March 7, 2004


CHANH NGUYEN
PRIMARY EXAMINER